

**APPLICATION**

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**FOR UNITED STATES LETTERS PATENT**

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**SPECIFICATION**

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TO ALL WHOM IT MAY CONCERN:

20       BE IT KNOWN THAT I, **Linda A. Ramaley**, a citizen of the United States  
have invented a new and useful sleeping bag system of which the following is a  
specification:

## **Sleeping Bag System**

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### **CROSS REFERENCE TO RELATED APPLICATIONS**

Not applicable to this application.

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### **STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT**

Not applicable to this application.

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### **BACKGROUND OF THE INVENTION**

#### **Field of the Invention**

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The present invention relates generally to outdoor sleeping equipment and more specifically it relates to a sleeping bag system for providing those items necessary to provide optimum space, comfort and protection from the elements for outdoor sleeping.

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## Description of the Prior Art

Outdoor portable sleeping equipment has been in use for years. Typically, outdoor portable sleeping equipment requires an individual to carry separately a tent, sleeping bag, and air-mattress or pad. Existing shelter systems do not traditionally combine all necessary elements into one system. Additionally, those systems which attempt to combine some or all of the elements of a tent, sleeping bag and air mattress or pad provide limited space for the occupant once the structure is erected. Current systems mostly provide a ground cover connected to an inflatable or self-supporting shelter.

In an effort to minimize size and weight the prior art combination systems consistently provide limited internal space for the occupant. Current designs are limited in their ability to provide the benefits of side mesh windows allowing cross-flow air ventilation and insect protection. Additionally, prior art current systems have semi-circular support structures which minimize comfort and storage space for the occupant.

Examples of patented devices which are related to the present invention include U.S. Patent 4,757,832 to Russel; U.S. Patent 4,605,029 to Russel; U.S. Patent 5,458,146 to Gregg; U.S. Patent 4,719,935 to Gustafson; U.S. Patent 3,860,980 to Ebert; and U.S. Patent 3,840,919 to Middleton.

Russel (U.S. Patent No. 4,757,832) discloses a self-supporting outdoor sleeping system. Russel teaches a ground cover sheet to which a tent cover is attached to the form of a body section and a head section.

Russel (U.S. Patent No. 4,605,029) discloses a self-supporting outdoor sleeping system similar in structure to the previous patent using flexible rods to provide a semi-circular enclosure.

5            Gregg (U.S. Patent No. 5,458,146) discloses a portable shelter system. Gregg teaches a one-person shelter with an internal support structure to hold the structure open.

10           While these devices may be suitable for the particular purpose to which they address, they are not as suitable for providing those items necessary to provide optimum space, comfort and protection from the elements for outdoor sleeping. All current combination systems are erected in a semi-circular position attempting to minimize weight and size of the system. By using a semicircular design these systems fail to benefit from the advantages available in the current design. The prior art  
15           systems do not provide the space necessary to sit within the structure. Current combination systems are limited to providing the occupant a place to sleep and be protected from the elements.

20           In these respects, the sleeping bag system according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in so doing provides an apparatus primarily developed for the purpose of providing all items necessary to provide shelter, comfort, security and protection from the elements for outdoor sleeping.

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## SUMMARY OF THE INVENTION

In view of the foregoing disadvantages inherent in the known types of outdoor sleeping equipment now present in the prior art, the present invention provides a new sleeping bag system construction wherein the same can be utilized for providing those items necessary to provide shelter, comfort and protection from the elements for outdoor camping .

The general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new sleeping bag system that has many of the advantages of the combination outdoor sleeping equipment mentioned heretofore and many novel features that result in a new sleeping bag system which is not anticipated, rendered obvious, suggested, or even implied by any of the prior art outdoor sleeping equipment, either alone or in any combination thereof.

To attain this, the present invention generally comprises a sleeping bag with its own attached canopy which includes a top cover, two side panels with mesh windows, window rain flap protection and an end panel with two-way storage pocket. The sleeping bag has a slot underneath it for receiving an air-mattress or pad. The canopy is held into position during use with two support poles. These support poles are held into place with support pole sleeves attached to the top of the canopy. The canopy includes attached tie down straps. Compartments within the canopy are used for storing poles, stakes and other items when the canopy is not in use. The entire system can be folded and rolled up for easy storage and transport.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof may be better understood, and in order that the present contribution to the art may be better appreciated. There are

additional features of the invention that will be described hereinafter and that will form the subject matter of the claims appended hereto.

5 In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose  
10 of the description and should not be regarded as limiting.

A primary object of the present invention is to provide a sleeping bag system that will overcome the shortcomings of the prior art devices.

15 A second object is to provide a sleeping bag system for providing those items necessary to provide shelter, comfort and protection from the elements for outdoor sleeping.

Another object is to provide a sleeping bag system that allows using either an  
20 air-mattress or a pad.

An additional object is to provide a sleeping bag system that is compact when not in use.

25 A further object is to provide a sleeping bag system that includes storage compartments for all items necessary to erect and set-up the system.

Another object is to provide a sleeping bag system that is convenient to use and easy to erect.

Another object is to provide a sleeping bag system that allows the canopy to be placed into a number of different configurations.

5           A further object is to provide a sleeping bag system that allows proper ventilation of the system when the canopy section is erected and closed.

An additional object is to provide a sleeping bag system that allows the use of an extra or attached ground cloth.

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Another object is to provide a sleeping bag system that includes tie downs for added stability during inclement weather.

15           Another object is to provide a sleeping bag system that includes sufficient interior space to allow the occupant to sit-up within the system.

A further object is to provide a sleeping bag system that allows the sleeping bag element to be detachable.

20           Another object is to provide a sleeping bag system that includes a two-way storage pocket so that the closed canopy does not need to be opened to get items previously stored.

25           Another object is to provide a sleeping bag system that includes a water and fire resistant floor covering and canopy.

Other objects and advantages of the present invention will become obvious to the reader and it is intended that these objects and advantages are within the scope of the present invention.

To the accomplishment of the above and related objects, this invention may be embodied in the form illustrated in the accompanying drawings, attention being called to the fact, however, that the drawings are illustrative only, and that changes may be  
5 made in the specific construction illustrated and described within the scope of the appended claims.



## BRIEF DESCRIPTION OF THE DRAWINGS

Various other objects, features and attendant advantages of the present invention will become fully appreciated as the same becomes better understood when considered in conjunction with the accompanying drawings, in which like reference characters designate the same or similar parts throughout the several views, and wherein:

FIG. 1 is an elevated oblique side view of the present invention.

FIG. 2 is an elevated rear oblique side view of the present invention.

FIG. 3 is a elevated oblique side view as in Fig 2 with the side panels opened.

FIG. 4 is a side view of the present invention

FIG. 5 is a side view of the present invention with the side panel removed.

FIG. 6 is a side view illustrating the stake tie down locations.

FIG 7. is a sectional view of the system taken along line 7—7 of FIG 2 showing internal support poles, pad and sleeping bag.

FIGS 8a-8c illustrate the folding and storage of the present invention.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

Turning now descriptively to the drawings, in which similar reference  
5 characters denote similar elements throughout the several views, Figures. 1 through 8c  
illustrate a sleeping bag system 10, which comprises a sleeping bag 60, a canopy with  
walls 20, a ground cloth 40, support poles 30 and 32, and tie-down ropes 34 with  
stakes 36. The sleeping bag 60 is fastened to the ground cloth 40. The sleeping bag 60  
has an insertion slot 52 between the sleeping bag 60 and the ground cloth 40 which  
10 permits the insertion of an air mattress or pad 50. Attached along the four sides of the  
ground cloth 40 is the canopy comprising two side panels 21, a top panel 23 and an end  
panel 29. Both the top panel 23 and the end panel 29 contain storage compartments 24  
and 27. The canopy 20 when erected is given its structure by two internal support  
poles 30 and 32.

15 The external shell 64 of the sleeping bag 60 is preferably constructed using  
standard sleeping bag construction fabric. The sleeping bag shell 64 may be filled with  
standard sleeping bag insulating material. As best seen in Figures 3 and 5, the sleeping  
bag 60 is attached on two sides to the ground cloth 40 with fasteners 62. The head-end  
20 side of the sleeping bag 60 is not attached to the ground cloth 40. The fasteners 62  
may be constructed from hook and loop fasteners, snaps, or any other suitable  
fastening material. The sleeping bag 60 is preferably constructed to be shorter in  
length than the ground cloth 40. Located between the head-end side of the sleeping  
bag 60 and the ground cloth 40 is an insertion slot 52 for an air mattress or pad 50.  
25 When an air-mattress or pad 50 is inserted into the insertion slot 52 it is sandwiched  
between the sleeping bag 60 and the ground cloth 40 section of the sleeping bag  
system.

The ground cloth **40** is preferably made from a waterproof or water resistant material. Attached to the foot-end of the ground cloth **40** are two end rings **26** which are best seen in Figure 1. The ground cloth **40** can be secured to the ground using stakes **36** inserted into the two end rings **26**. Attached to the ground cloth **40** on all  
5 four sides is the canopy structure **20**. The ground cloth **40** may be attached to the canopy structure using zippers or some other suitable fastener. The canopy structure **20** consists of two side panels **21**, one top panel **23** and one end panel **29**. The canopy structure **20** is preferably made from water resistant material. The canopy structure **20** may be constructed with camouflage patterned material. However, it can be  
10 appreciated by one skilled in the art that other embodiments of the present invention may include canopy structures **20** made from material with other physical properties and appearance.

The side panels **21** are attached to the ground cover **40**, the end panel **29**, and  
15 the top panel **23** by zippers **28** or some other suitable fasteners. Located on each side panel **21** is a window **22**. The window **22** is preferably made from mesh material or some other suitable material which will keep insects out of the sleeping bag system, but allow air to flow through the window. Each window **22** preferably has a rain flap **72** which covers the window **22** when the rain flap **72** is allowed to hang down freely.  
20 The rain flap **72** may be secured about each window **22** by conventional securing systems. The rain flap **72** can be rolled out of the way of the window **22** and secured in the rolled up position with rain flap straps **74** or some other suitable fastening system.

25 The top panel **23** is attached to the ground cover **40**, the side panels **21** and the end panel **29** by zippers **28** or some other suitable fasteners. Located along the foot end of the top panel **23** is a storage compartment **27** where the stakes **36**, support poles **30** and miscellaneous other items can be stored when the sleeping bag system **10** is not erected. Affixed to the front corners of the top panel **23**, as best seen in Figure 1, are

two tie down straps 34. The tie down straps 34 are secured to the ground with stakes 36 when the sleeping bag system 10 is erected. However, it can be appreciated by one skilled in the art that the stability of the erected sleeping bag system 10 may be obtained using other stabilization methods.

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The end panel 29 is attached to the ground cover 40, the side panels 21 and the top panel 23 by zippers 28 or some other suitable fastener. Preferably located within the approximate center of the end panel 29, is a two-way storage pocket 24. As best seen in Figure 7, the two-way storage pocket 24 has zippers 25 affixed to the top end of the storage pocket 24. One zipper 25 is affixed to the outer wall of the end panel 29 when the sleeping bag system 10 is erected and one zipper 25 is affixed to the inner wall of the end panel 29 when the sleeping bag system 10 is erected.

As best seen in Figure 7, the erected sleeping bag system's 10 physical structure is maintained by two support poles 30 and 32. The support poles 30 and 32 are preferably made from aluminum or some other durable and lightweight material. The support poles 30 and 32 may be collapsible to allow their storage in the top panel's 23 storage compartment 27. The support poles 30 and 32 have a length side and a width side which are connected at the corners with corner couplers 38. The sleeping bag system's 10 mid-point support pole 30 may be maintained in position within the sleeping bag system 10 by sliding the mid-point support pole 30 through a sleeve 31 attached midway down the interior side of the top panel 23. The sleeping bag system's 10 head-end support pole 32 may be maintained in position with the sleeping bag system 10 by sliding the head-end support pole 32 through a sleeve 33 attached at the head-end of the interior side of the top panel 23. However, it can be appreciated by one skilled in the art that the support poles 30 and 32 may be temporarily affixed to the canopy structure 20 by other fastening methods.

By lengthening the width of the sleeping bag 60, ground cloth 40, the top panel 23 and the two support poles 30 and 32 the system can be modified to provide a sleeping bag system 10 for more than one person.

5           In use, the sleeping bag system 10 is rolled out on the camping location. The support poles 30 and 32, and stakes 36 are removed from the top panel storage compartment 27. Two stakes 36 are used to secure the foot end of the canopy structure 20 to the ground surface. The width section of the mid-point support pole 30 is inserted through the mid-point support pole sleeve 31. The width section is connected  
10 to the length section of the support pole 30 with corner couplers 38 and placed to support the bottom half of the canopy structure 20. The width section of the head-end support pole 32 is inserted through the head-end support pole sleeve 33. The width section is connected to the length section of the support pole 32 with corner couplers 38 and placed to support the head end of the canopy structure 20. The tie down straps  
15 34 attached to the head-end of the top panel 23 are attached to the ground structure using stakes 36. The top zipper 28 on the side panels 21 are connected along the length of the top panel 23. The zipper 28 along the end panel 29 is connected to the two side panels 21 and the top panel 23. The sleeping bag system 10 is now in its erected state.

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To enter the sleeping bag system 10, one of the side panels 21 can be zippered open as best seen in Figure 3. Depending on the climate conditions, the side rain flaps 72 can be either rolled up and secured with the rain flap straps 74 or left down. Depending on the desires of the user, the side panels 21 and end panel 29 can be either  
25 closed, zippered partially open or zippered open all the way to the foot end of sleeping bag system 10.

To take down and transport the sleeping bag system 10 the end panel 29 is unzipped from the two side panels 21 and the top panel 23 and laid flat on the ground structure. The side panels 21 are unzipped from the top panel 23 and laid flat on the ground. The tie down straps 34 are disconnected from the stakes 36. The head-end support pole 32 is taken apart and the width section is removed from the head-end support pole sleeve 33. The mid-point support pole 30 is taken apart and the width section is removed from the mid-point support pole sleeve 31. The two stakes 36 used to hold the foot end of the canopy structure 20 to the ground are removed. The support poles 30 and 32 and stakes 36 are placed in the top panel storage compartment 27. As best seen in Figures 8a through 8c, the two side panels 21 are folded over and on top of the ground cloth 40 and sleeping bag 60. The end panel 29 is then folded over and on top of the ground cloth 40 and sleeping bag 60. Beginning at the foot end of the sleeping bag system 10 the sleeping bag system 10 is rolled up towards the head end of the sleeping bag system 10. The storage ties 70 are used to secure the sleeping bag system in the stored and rolled up position.

As to a further discussion of the manner of usage and operation of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed to be within the expertise of those skilled in the art, and all equivalent structural variations and relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to

those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.